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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,087	06/27/2003	Fernando C. Vidaurri JR.	CPCM:0002-1/FLE 33776US	7544

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EXAMINER	
BUTTNER, DAVID J	
ART UNIT	**PAPER NUMBER**
1712	

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/609,087	VIDAURRI ET AL.	
	Examiner	Art Unit	
	David Buttner	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1;35-50,60-72* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,35-50 and 60-72* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claims 68 and 71 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The examiner is unable to locate basis for exclusion of lithium halide. The specification specifically calls for its inclusion (page 8 line 20). Applicant must point out specifically where the specification supports any future amendment as required by MPEP 2163.06.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 42-50,70 and 72 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Senga '469.

Sega exemplifies (No. 1) reacting NaOH, and N-methylpyrrolidone in water at 118^{0}C. This is applicant's first step . The temperature is raised to 186^{0}C to distill off water. Senga (col. 3, line 7-11) clearly suggests dehydrating the metal aminoalkanoate. This meets applicant's next step. Senga further isolates the sodium N-methyl amino butyrate into a dry state.

Senga adds the dry sodium N-methyl amino butyrate to fresh N-methyl pyrrolidone and sodium hydrosulfide and distills off water at 202^0 C (col. 8 line 10-17). This is applicant's next step, with the exception that a dry-rather than a solution of sodium N-methyl amino butyrate is employed. Finally, lithium chloride and dichlorobenzene is added and polymerization carried out (col. 8, line 33-37) which is applicant's last step.

It is apparent that isolating the dry metal aminoalkanoate was carried out merely to perform tests to confirm the identity of the compound.

In a commercial process, the time and expense of this isolation (i.e. removal of excess N methylpyrrolidone which acts as a solvent) would not be carried out except for random quality control checks on the sodium N-methyl amino butyrate being produced. This is especially true in view of the fact fresh N- methyl pyrrolidone is added along with the sodium hydrosulfide (col. 8, line 13) during preparation of the polyphenylenesulfide.

It is readily apparent to one of ordinary skill to mix the dehydrated N-methylpyrrolidone/sodium aminobutyrate solution directly with the sulfur source.

Further, Senga states that the reactants can be added to the polar solvent (i.e. N-methylpyrrolidone) in any order (col. 6 line 11). This also suggests leaving the sodium

amino butyrate in solution with N-methylpyrrolidone prior to adding the sulfur source. This would result in the solution applicant calls for in the third step.

Claims 1,35-50,60-67,69,70 and 72 rejected under 35 U.S.C. 103(a) as being unpatentable over Senga '469 in view of Koyama '433.

Senga does not teach what his reactor is made of. Koyama (col 5 line 3-8,56-60) teaches some specific stainless steel alloy reactors are corrosion resistant when polymerizing PPS.

It would have been obvious to use these alloys as the reactor for making Senga's PPS to decrease corrosion. Inherently, the low metal ppm must result because Senga suggests the same polymerization procedure as applicant

Claims 42-50 and 70-72 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Campbell '356.

Campbell (examplel III) reacts NaOH with methylpyrrolidone in water at 118^0 C, which distills off the water (col. 5, line 43-49). This meets applicant's first and second steps. Although Campbell's example III goes on to isolate the resultant sodium N-methylaminobutyrate from its solution, it is clear this done merely to confirm the identity of the product in solution. Note that the "solution" is said to useful in preparation of poly(phenylenesulfide) polymers (col 5 line 31-37).

Sodium bisulfide and N-methypyrrolidone is added to the sodium methylaminobutyrate and heated to distill off more water (col 3 line 36-42). This is applicant's next two steps. Finally, dichlorobenzene is added and polymerization is commenced (col. 3, line 44). This meets applicant's last step.

Claims 1,35-50 and 60-72 rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell '356 in view of Koyama '433.

Campbell does not teach what his reactor is made of. Koyama (col 5 line 3-8,56-60) teaches some specific stainless steel alloy reactors are corrosion resistant when polymerizing PPS.

It would have been obvious to use these alloys as the reactor for making Campbell's PPS to decrease corrosion. Inherently, the low metal ppm must result because Campbell suggests the same polymerization procedure as applicant

Applicant's arguments filed 4/18/05 have been fully considered but they are not persuasive.

Applicant argues Senga and Campbell both isolate their sodium methylaminobutyrate before combining with the sulfur source.

The Senga's and Campbell's examples do isolate their sodium methylaminobutyrate. However, the isolation was conducted in order to perform an elemental analysis to confirm the identity of the product and its yield. Neither reference requires the compound to be isolated prior to contact with the sulfur source. In fact, Campbell specifically states his solution of sodium methyl aminobutyrate in N-methylpyrrolidone is a useful "solution" which can be used in preparation of PPS (col 5 line 31). If isolation was required, Campbell would have stated the "sodium aminoalkanoate" is useful in preparation of PPS. Why would one of ordinary skill bother to isolate the sodium methylaminobutyrate from N-methylpyrrolidone if additional N-methylpyrrolidone is to be later added along with the sulfur source?

Senga (col 3 line 9) specifically teaches the sodium aminoalkanoate can be used in the form of an aqueous solution. One of ordinary skill is clearly led to use the sodium aminoalkanoate/N-methylpyrrolidone/partially(or fully)dehydrated water solution without isolation in making the polyphenylenesulfide. Why would one of ordinary skill bother to isolate the sodium methylaminobutyrate from N-methylpyrrolidone if additional N-methylpyrrolidone is to be later added along with the sulfur source?

Applicant argues the examiner has taken Official Notice of facts outside of the record to cure the many deficiencies of the cited references.

Applicant fails to point out on which facts the examiner has taken Official Notice and that applicant challenges. The examiner has pointed out where the prior art impliedly (if not expressly) suggests employing sodium aminoalkanoate in solution. No competent chemical practioner could challenge the principle that isolating a chemical compound from solution occurs with at least some economic loss in expense and time.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is 571-272-1084. The examiner can normally be reached on weekdays from 10 to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAVID J. BUTTNER
PRIMARY EXAMINER

D. Buttner
6/13/05